

REMARKS

As a preliminary matter, Applicant addresses the Examiner's assertion that the statutory period for reply expires three months from the date of the final rejection. In summary, Applicant respectfully asserts that the a proper response was filed on the two-month date from the Final Office Action, and, as such, the statutory date for reply should be calculated from the mailing date of the advisory action. Specifically, the Manual of Patent Examining Procedure states:

(A) *All final rejections setting a 3-month shortened statutory period (SSP) for reply should contain one of form paragraphs 7.39, 7.40, 7.40.01, 7.41, 7.41.03, or 7.42.09 advising applicant that if the reply is filed within 2 months of the date of the final Office action, the shortened statutory period will expire at 3 months from the date of the final rejection or on the date the advisory action is mailed, whichever is later.*

M.P.E.P. § 706.07(f) (A) (emphasis added); see also M.P.E.P. § 706.07(f) (D) & (F). In this case, Applicant filed the Response to Final Office Action on Monday, June 28, 2004, which is clearly *within 2 months* of the Final Office Action mailed April 27, 2004. At this time, it is one month after the mailing date of the Advisory Action, and the shortened statutory period expired on the *mailing date* of the Advisory Action. Thus, only a one-month extension fee is due at this time. However, if the Examiner or the Commissioner deems that additional fees are necessary for prosecution of the present application, Applicant hereby authorizes the Commissioner to charge Deposit Account No.: 08-2025 for all fees deemed necessary.

In the Final Office Action, the Examiner rejected claims 46-90 and, in the Advisory Action, maintained these rejections. By the present Response, Applicant has amended claims 47, 56, 63, 68, 77 and 86 and canceled claims 64 and 81 without prejudice. Upon entry of the amendments, claims 46-63, 65-80 and 82-90 will be pending in the present application. In light of the foregoing amendments and the following remarks, Applicant respectfully requests reconsideration and allowance of all pending claims.

Rejections Under 35 U.S.C. § 103(a)

In the Final Office Action, the Examiner rejected claims 46-62, 65, 68-76, 81, 84, and 88 under Section 103 as obvious in view of various references. Applicant, however,

respectfully asserts that the cited references, at a minimum, lack the requisite motivation for combination to reach the instant claims, because the Alexander et al. reference teaches away from the subject matter of the instant claims.

First, the burden of establishing a *prima facie* case of obviousness falls on the Examiner. *Ex parte Wolters and Kuypers*, 214 U.S.P.Q. 735 (PTO Bd. App. 1979). To establish a *prima facie* case, the Examiner must not only show that the combination includes *all* of the claimed elements, but also a convincing line of reason as to why one of ordinary skill in the art would have found the claimed invention to have been obvious in light of the teachings of the references. *Ex parte Clapp*, 227 U.S.P.Q. 972 (B.P.A.I. 1985). Thus, Examiner must provide *objective evidence*, rather than subjective belief and unknown authority, of the requisite motivation or suggestion to combine or modify the cited references. *In re Lee*, 61 U.S.P.Q.2d. 1430 (Fed. Cir. 2002).

Furthermore, it is improper to combine references where the references teach away from their combination. *In re Grasselli*, 218 U.S.P.Q. 769, 779 (Fed. Cir. 1983); M.P.E.P. § 2145. Indeed, a showing that a prior art reference, in any material respect, teaches away from the claimed invention rebuts a *prima facie* case of obviousness. See *In re Geisler*, 43 U.S.P.Q.2d 1362, 1366 (Fed. Cir. 1997). With the foregoing in mind, Applicant respectfully asserts that the instant claims are not obvious in view of the cited references taken alone or in combination.

First Rejection Under 35 U.S.C. § 103

In the Office Action, the Examiner rejected claims 46-50, 52-59, 61, 62 and 68-76 under 35 U.S.C. § 103 (a) as obvious in view of the Bausch et al. reference and the Alexander et al. reference (U.S. Patent No. 5,420,808). Applicant respectfully asserts that the Alexander et al. reference teaches away from combination with the Bausch et al. reference to reach the instant claims.

Independent Claims 46, 56, and 68 and the Claims Depending Therefrom

Independent claims 46, 56 and 68 each recites, in a general sense, a substantially constant operating frequency. Specifically, the above-listed claims recite as follows:

Claim 46: "analyzing the plurality of operating parameters to provide a target voltage that substantially minimizes power consumption and that simultaneously maintains a substantially constant operating frequency;"

Claim 56: "analyzing an operational relationship between the operating temperature, the operating parameters, an operating voltage, and an operating frequency to provide a target voltage that substantially reduces power consumption without substantially altering operating frequency of the integrated circuit;" and

Claim 68: "providing a control system configured to analyze an operational relationship between a sensed operating temperature, a sensed operating parameter including operating load, performance, ambient conditions, resistance or any combination thereof, an operating voltage, and an operating frequency to provide a target voltage that substantially minimizes power consumption and that simultaneously maintains a substantially constant operating frequency of the integrated circuit;"

(Emphasis added.) Applicant respectfully asserts that the cited references, at a minimum, teach away from combination to reach the above-listed claims. More specifically, even if the Examiner's assertions and contentions regarding the Bausch et al. and Alexander et al. references are taken as correct, the cited references still fail to present the necessary motivation for combination to reach the instant claims.

For example, the Examiner asserts that the Alexander et al. reference teaches power conservation techniques involving detecting operating load of an integrated circuit (IC) "for the purpose of switching to a low power mode." Final Office Action mailed April 27, 2004, p. 7 (emphasis added). Indeed the passage of the Alexander et al. reference cited by the Examiner states that "a processor can be placed in a lower power mode by disabling power or by slowing clock signal transitions to the entire microprocessor." See Alexander et al., col. 3, ll. 1-5 (emphasis added). Thus, the Alexander et al. reference, in accordance with the Examiner interpretation, teaches a power conservation technique that manipulates clock signal frequency rather than voltage to conserve power.

With this in mind, Applicant notes that the Bausch et al. reference teaches that the disclosed technique is tailored to the desired purpose, i.e., reduced power consumption, maximized performance, minimum power for maximized battery life, maximized speed for maximized performance, or high reliability mode depending on a selection by the user from a configuration screen, which is illustrated in FIG. 7 of the Bausch et al. reference. *See* Bausch et al., col. 5, ll. 30-42; FIG. 7. Thus, in the Bausch et al. reference, selecting between these various operating modes determines the voltage track the disclosed device will operate along. *See id.* at col. 4, ll. 29-35; FIG. 2. For example, if substantially maximized performance is desired, then voltage track 230 is selected by the Bausch et al. device. *See id.* at col. 4, ll. 39-45. Alternatively, if minimizing power consumption is desired, then voltage track 250 is selected. *See id.* at col. 4, ll. 58-64.

However, as taught by the Alexander et al. reference, switching between the various operating modes causes the operating frequency to change. That is, the Alexander et al. reference teaches that changing to low power mode decreases the operating frequency of the device. Thus, if one of ordinary skill in the art were to look to the Alexander et al. reference, the artisan would find that operating load, as one example of an operating condition or parameter, is monitored to determine the desired operating mode, and that switching between the various operating modes calls for a change in the operating frequency. Accordingly, if the teachings of the Alexander et al. reference, as interpreted by the Examiner, are combined with those of the Bausch et al. reference, the skilled artisan, at best, would find that operating at various modes calls for operations along the various voltage tracks disclosed in FIG. 2 of the Bausch et al. reference, and that these tracks illustrate operations at different operating frequencies. Thus, the cited reference combination teaches against maintaining the substantially constant operating frequencies recited in the instant claims. Rather, the combination of the Bausch et al. reference with the Alexander et al. reference teaches, at best, that various parameters of the IC chip, such as operating load, are monitored to switch between operating modes and, as such, operating frequencies.

Thus, Applicant respectfully assert that the Examiner's proposed reference combination teaches away from the subject matter of the instant claims and, as such, lacks the requisite motivation for combination necessary to reach the instant claim. Accordingly, Applicant

respectfully requests reconsideration and allowance of independent claims 46, 56 and 68 and their respective dependent claims.

Second Rejection Under 35 U.S.C. § 103(a)

In the Office Action, the Examiner rejected dependent claims 51, 60, and 73 under 35 U.S.C. § 103(a) as obvious in view of the Bausch et al., Alexander et al. and Ginzl et al. (U.S. Patent No. 5,347,260) references. Applicant respectfully disagrees with the rejection.

The above-listed dependant claims depend respectively from allowable base claims, which are discussed above. Moreover, Applicant respectfully asserts that the Ginzl et al. reference fails to obviate the deficiencies of the Bausch et al. and Alexander et al. references, as discussed above. Therefore, Applicant respectfully asserts that the instant claims are patentable over the cited references, taken alone or in combination, not only for their respective dependencies on allowable base claims but also by virtue of the additional features recited therein. With the foregoing in mind, Applicant respectfully requests reconsideration and allowance of the instant claims.

Independent Claims 63, 77 and 86 and The Claims Depending Therefrom

In the Office Action, the Examiner rejected claims 63, 66, 67, 77-80, 82-87, 89 and 90 under 35 U.S.C. § 102(e) as anticipated by the Bausch et al. reference (U.S. Patent No. 6,304,824 B1). However, in light of the foregoing amendments, Applicant respectfully asserts that the cited reference does not disclose all of the features recited in the instant claims and, as such, does not anticipate the instant claims. Indeed, the Examiner states that the Bausch et al. reference "does not explicitly disclose obtaining the operating load of an integrated circuit by detecting a power load variation of the integrated circuit." See Final Office Action mailed April 37, 2004, p. 7. Moreover, as discussed above, Applicant respectfully asserts that the Ginzl et al. reference and the Alexander et al. reference fail to obviate the deficiencies of the Bausch et al. reference as discussed above. Therefore, Applicant respectfully requests reconsideration and allowance of independent claims, 63, 77 and 86 and the claims depending therefrom.

Conclusion

Applicant respectfully submits that all pending claims should be in condition for allowance. However, if the Examiner believes certain amendments are necessary to clarify the present claims or if the Examiner wishes to resolve any other issues by way of a telephone conference, Applicant kindly invites the Examiner to contact the undersigned attorney at the telephone number indicated below.

Respectfully submitted,



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